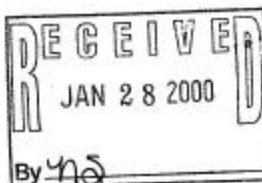




Dr. D. Clark Gibbs, Regulatory Official
U.S. Department of Energy
Richland Operations Office
P.O. Box 550, A4-70
Richland, Washington 99352



00RU-0202
00RU-B-109

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JAN 25 2000

Dear Dr. Gibbs:

**Contract No. DE-AC06-96RL13308 – W375 – RESPONSE TO AUTHORIZATION BASIS
MAINTENANCE INSPECTION REPORT**

Reference: CCN 009392, Letter, D. C. Gibbs, DOE/RL, to M. J. Lawrence, BNFL Inc.,
"Authorization Basis Management Inspection Report, IR-99-007," 00-RU-0114,
dated December 13, 1999.

During the week of October 4-8, 1999, the Regulatory Unit conducted an inspection of the River Protection Project-Waste Treatment Plant's Authorization Basis Management Process. Subsequent to the initial inspection, the Regulatory Unit (RU) performed a follow-up inspection on November 22-23, 1999 to address inconsistencies in documentation regarding revisions to BNFL Inc. Radiation Protection Program (RPP), an authorization basis document.

As a result of the two inspections, the RU identified four findings and two weaknesses.

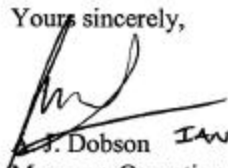
The findings identified are as follows: (1) BNFL Inc. failed to establish a process that ensured design-related aspects of the authorization basis were maintained current with the facility design; (2) untrained personnel were performing screening reviews and safety evaluations; (3) BNFL staff were not following procedures; and (4) BNFL Inc. revised information in a quality-related record without revising the record as required.

The inspection team identified two program weaknesses. The first concerned procedural implementation of the authorization basis amendment process. The second concerned the process BNFL Inc. used for notifying the RU of a change to an authorization basis document when the effectiveness of the document did not change as a result of the revision.

This letter responds to the findings and weaknesses identified in the RU inspection report.

If you have any questions or if we can be of further assistance, please call Dennis Klein at 371-3743 or Don Edwards at 371-3741.

Yours sincerely,


P.P. J. Dobson IAN MILGATE
Manager, Operations and Safety
BNFL Inc.

MAP/jca

Attachment: Response to Findings and Weaknesses, IR-99-007

cc:

Barr, R. w/a	DOE/RL	A4-70
Barrett, M.K. w/o	DOE/ORP	H6-60
Brown, N. w/a	DOE/ORP	H6-60
Bullock, M.J. w/a	BNFL Inc.	A116
Dobson, A. J. w/a	BNFL Inc.	A117
Edwards, D. W. w/a	BNFL Inc.	B140
Hammond, J. M. w/a	BNFL Inc.	B144
Landry, W. w/o	BNFL Inc.	Fairfax
Lawrence, M.J. w/o	BNFL Inc.	A110
Lehman, K. w/a	BNFL Inc.	B112
Molnar, E. w/o	BNI	A216
Morgan, S.R. w/o	BNFL Inc.	A119
PDC w/a	BNFL Inc.	K110
Smith, L. w/o	BNFL Inc.	B220
Smyser, L. w/a	PNNL	H6-61
Tooze, R. w/o	BNFL Inc.	Fairfax
Voyles, G. w/a	BNFL Inc.	B105
Younger, C. w/a	BNFL Inc.	C202

**RESPONSE TO FINDING
IR-99-007-01-FIN**

Summary of Finding

Section 4.1.3, "Authorization Basis," of DOE/RL-96-0006 requires that the authorization basis be maintained current. Section 3.2 of RL/REG-97-13 specifies that changes to facility design will either be consistent with the existing authorization basis or that the authorization basis will be revised before the proposed changes are implemented. In related parts, the ISMP, Section 3.3.2, "Control of the Authorization Basis," and Section 5.3, "Configuration Management," specify that before any given change is implemented, the impact of the proposed change on the authorization basis will be determined and the necessary changes to the authorization basis will be made.

Section 3.1 of RL/REG-97-13 and Section 3.3.3, "Changes to the Authorization Basis," of the ISMP specify that the process for evaluating and implementing changes will be conducted according to approved procedures under the Contractor's Quality Assurance Program.

Contrary to the above, during the week of October 4-8, 1999, the inspectors found that the Contractor had not established or implemented a process that would ensure that the authorization basis was maintained current with respect to the facility design.

BNFL Inc. response:

1. Agreement or disagreement with the Finding

BNFL Inc. (BNFL) agrees with the Finding. The Finding is based on the apparent disconnect between the issuance of design documents (e.g., drawings) and the completion of the authorization basis change process. According to current WTP procedures, it is possible that a design document could be issued for use in procurement or construction without completion or approval of Authorization Basis (AB) changes necessary to ensure consistency of the AB and design. In addition, there is no current explicit procedural statement requiring reconciliation of design and the AB before "procurement and/or construction".

2. Reason for the Finding

BNFL developed an Authorization Basis change program tailored to the early design development and confirmation stage of the project. The fact that there is any Authorization Basis control at this point is, in itself, a unique feature of this project. Consequently, some ABCN safety evaluations and follow-on changes were delayed as a cost and effort-saving mechanism. Specifically, the project is in an extremely iterative design process such that multiple and frequent design changes are occurring. The AB change process requires the issuance of an ABCN to enable the tracking of all design changes for future safety evaluation. As anticipated, many design changes have been overcome by subsequent design changes, rendering many early design changes and associated ABCNs null and void. The approach

chosen was designed to ensure that actual safety evaluations and any required AB changes would be accomplished after the design begins to stabilize but well before any documents were to be issued for actual procurement and/or construction. The rationale was that fewer AB changes would need to be made and changes could be grouped together for analysis and approval. In addition, BNFL has always intended that Environmental, Safety, and Health (ES&H) professionals would approve design changes only after review and reconciliation against the AB. Now, the major shifts in design are beginning to subside so that reconciliation can be completed. At this time, there is a disconnect between the design change and approval process and the AB change and approval process, which needs to be addressed. The current program needs to be adjusted so that it deals adequately with timely closeout of design changes and the associated AB change documentation. Furthermore, there must be procedural evidence of the timely reconciliation of the design and the AB.

. The corrective steps that will be taken to avoid further Findings

BNFL management has reviewed the authorization basis maintenance program and is refining the process. Meetings have been conducted within the project and between the project and the Regulatory Unit (RU) on various aspects of the revised program. BNFL has committed to bring the AB into complete alignment with the design by mid-April 2000 and to keep it aligned, within a reasonable time gap, from then on. Key features of the new AB maintenance program are as follows:

- 1) ES&H will review design documents, at the "back end," to ensure that design changes do not impact the safety basis. Also, improvements will be made to the AB change process to ensure ABCNs, Safety Evaluations, and ABARs are linked to one another and to the design change documents that generated the change. ES&H will review the listing of ABCNs and Safety Evaluations to ensure all applicable AB change activities have been completed before ES&H approves design documents. Database tools will be used to more effectively track these various documents. Procedural requirements will be developed and implemented to ensure that AB screening and change documents are properly dispositioned before associated design documentation is issued for procurement or construction.
- 2) BNFL has adopted the Design Input Memorandum (DIM) as a replacement mechanism for the AB screening for drawings, specifications, and DCAs. The DIM and its source, the Design Criteria Database, will provide the necessary "screening" of design documents against the AB. Approved DIMs will attest to the fact that the design is aligned with the design criteria and design controlling features of the AB. Documents issued to support the April 2000 WTP cost estimate and Part B-2 proposal will be evaluated against the AB. Where necessary, AB change notices will be generated. BNFL's new AB maintenance program will be provided to the RU under separate cover.
- 3) BNFL has developed the "ES&H Safety Checklist". This checklist will be used by the ES&H department to review documents. The checklist will ensure nuclear, process,

industrial, and environmental safety are considered and the AB analysis is maintained before ES&H approval or signature on new designs or design changes.

- 4) Any future changes causing inconsistency with the AB will require engineering-generated ABCNs. Revised DIMs will be required whenever the parent document is revised (i.e., ensure continued consistency with the AB).
- 5) Procedural changes will be made to ensure close linkage between the design change process and the AB change process. Notably, ES&H will ensure design changes are not approved for implementation until AB reconciliation has been completed. Procedural weaknesses and inconsistencies noted by the RU in Finding IR-99-007-01-FIN (to K70P528, K70C528, K70P551, K70C551, and K70P030) will be corrected.

4) The date when full compliance with the applicable commitments in the authorization basis will be achieved

Full compliance will be achieved when the new AB maintenance program is in effect, new document review and approval procedures are issued, the set of design documents underpinning the fixed price proposal have been evaluated against the AB, and AB change notices have been generated, if necessary.

Due Date: April 24, 2000.

2) Reason for the Finding

The reason for the Finding was lack of clarity in AB change control procedures, specifically, K70C528, Managing Change to Control the Authorization Basis. In addition, the failure to follow through on an ABCN for the QAPIP revision is a training program problem. The author of the QAPIP changes was trained on AB maintenance, but failed to recognize his responsibilities for preparation of ABCNs for the SRD and the ISMP, which were affected by his changes.

3) The corrective steps that will be taken to avoid further Findings

The two individuals responsible for creating the triggering events for these two Findings have been advised of the need for strict compliance with procedural requirements.

BNFL is in the process of revising the authorization basis maintenance program. As part of that process, BNFL will revise the K70C528 code of practice to remove ambiguities and inconsistencies within the code of practice, and between the COP and other project procedures. A clear path will be established for preparation, review, and approval of all AB documents. Guidance will be included that specifically requires a screening evaluation (and, as necessary an ABCN and SE) for applicable changes to any AB document. The current CoP tends to address how the AB is screened if other documents conflict with the AB. It does not address how the AB, itself, is screened and modified if another AB document is changed. Other project change control procedures, for example K13P005, Quality Assurance Program: Preparation, Review, Approval, and Distribution, will be reviewed and revised to ensure consistency among all procedures.

Subsequent to this Finding, QAPIP Revision 5 was withdrawn by BNFL and Revision 4c was approved by the RU. A new screening assessment was prepared (SCA-W375-00-00002) indicating the impact of the revised QAPIP on the SRD and ISMP. New ABCNs and Safety Evaluations on those documents are being prepared.

4) The date when full compliance with the applicable commitments in the authorization basis will be achieved

Full compliance will be achieved when the new AB maintenance program is in effect and new authorization basis document review and approval procedures are issued.

Due Date: April 24, 2000.

- 4) **The date when full compliance with the applicable commitments in the authorization base will be achieved**

Due Date: March 1, 2000

RESPONSE TO FOLLOW-UP ITEMS

IR-99-007-02-IFI

The inspectors concluded that the Contractor's authorization basis amendment process was disjointed, confusing, and appeared at times to be inconsistent with regulations. The procedural issues are considered a program weakness.

Response:

BNFL agrees with this weakness and follow-up item. Numerous input documents including the Code of Federal Regulations (CFRs) and project procedures and codes of practice (CoP) have created confusion and inconsistency within the AB change control program. BNFL is in the process of revising the AB maintenance program. One important element of that revised program will be the reconciliation of all procedures and CoPs to ensure consistency and accuracy. Some documents will be deleted and their requirements combined into fewer remaining documents, thus improving consistency and efficient usage. The CFRs and top-level requirement documents will be reviewed to ensure project procedures incorporate all requirements.

Due Date: April 24, 2000.

IR-99-007-04-IFI

The Contractor had not appropriately implemented the requirements of RL/REG-97-13 and Section 3.3.3 of the ISMP as they relate to notification of the RU of changes to authorization basis documents implemented without prior RU approval. This was considered a program weakness.

Response:

BNFL agrees with this weakness and follow-up item. Beginning immediately, BNFL will notify the RU, in the form of docketed correspondence, of all changes to the authorization basis. This will be proceduralized by revision to K70C528, Code of Practice for Managing Changes to Control the Authorization Basis.

Due Date: April 24, 2000.